

IN THE CLAIMS:

Please cancel Claims 1 to 18 without prejudice or disclaimer of subject matter and add new Claims 19 to 29 as follows. The claims, as pending in the subject application, read as follows:

1. to 18. (Canceled)

19. (New) An image processing apparatus capable of transmitting binary image data to an external image output device via a network, said apparatus comprising:

input means for inputting, pixel by pixel, a multilevel image containing gray-scale information;

binarization means for binarizing the multilevel image by using a dot connectivity parameter which is variably controllable to control dot connectivity in a binary image;

communication means for communicating with the external image output device via the network;

characteristic-information acquisition means for acquiring characteristic-information concerning dot reproducibility from the external image output device by said communication means;

determination means for determining the dot connectivity parameter used by the binarization means in accordance with the characteristic-information acquired by said characteristic-information acquisition means; and

transmitting means for transmitting image data binarized by said binarization means to the external image output device,

wherein said binarization means binarizes the multilevel image using the dot connectivity parameter determined by the determination means, and

said transmitting means transmits the image data binarized by said binarization means to the external image output device from which the characteristic-information is acquired.

20. (New) The apparatus according to claim 19, further comprising correlation storing means for storing a correlation between the dot connectivity parameter and the characteristic-information of the external image output device.

21. (New) The apparatus according to claim 19, further comprising dot connectivity parameter storing means for storing the dot connectivity parameter determined by said determination means,

wherein said binarization means binarizes the multilevel image by using the dot connectivity parameter stored in said dot connectivity parameter storing means.

22. (New) The apparatus according to claim 19, wherein said determination means calculates a dot connectivity parameter which is suitable for the external image output device, which communicates via the network, based on the acquired characteristic-information.

23. (New) A method for an image processing apparatus capable of transmitting binary image data to an external image output device via a network, the method comprising:

an input step of inputting, pixel by pixel, a multilevel image containing gray-scale information;

a binarization step of binarizing the multilevel image by using a dot connectivity parameter which is variably controllable to control dot connectivity in a binary image;

a communication step of communicating with the external image output device via the network;

a characteristic-information acquisition step of acquiring characteristic-information concerning dot reproducibility from the external image output device;

a determination step of determining the dot connectivity parameter used by the binarization step in accordance with the characteristic-information acquired by the characteristic-information acquisition step; and

a transmitting step of transmitting image data binarized by the binarization step to the external image output device,

wherein the binarization step binarizes the multilevel image by using the dot connectivity parameter determined by the determination step, and

the transmitting step transmits the image data binarized by the binarization step to the external image output device from which the characteristic-information is acquired.

24. (New) The method according to claim 23, further comprising a correlation storing step of storing a correlation between the dot connectivity parameter and the characteristic-information of the external image output device.

25. The method according to claim 23, further comprising a dot connectivity parameter storing step of storing the dot connectivity parameter determined by the determination step,

wherein the binarization step binarizes the multilevel image by using the stored dot connectivity parameter.

26. (New) The method according to claim 23, wherein the determination step calculates a dot connectivity parameter that is suitable for the external image output

device, which communicates via the network, based on the acquired characteristic-information.

27. (New) An image processing apparatus capable of transmitting binary image data to an external image output device via a network, said apparatus comprising:

input means for inputting, pixel by pixel, a multilevel image containing gray-scale information;

binarization means for binarizing the multilevel image by using a dot connectivity parameter which variably controllable to control dot connectivity in a binary image;

means for transmitting, to the external image output device, test pattern data for acquiring information concerning dot reproducibility of the external image output device;

reading means for reading a test pattern output by the external image output device based on the test pattern data;

calculation means for calculating a dot connectivity parameter capable of producing dots with a desired dot connectivity for the external image output device, based on the test pattern read by said reading means; and

transmitting means for transmitting image data binarized by said binarization means to the external image output device,

wherein said binarization means binarizes the multilevel image by using the dot connectivity parameter calculated by said calculation means, and

said transmitting means transmits the image data binarized by said binarization means to the external image output device in which the test pattern has been output.

28. (New) A method for an image processing apparatus capable of transmitting binary image data to an external image output device via a network, the method comprising:

an input step of inputting, pixel by pixel, a multilevel image containing gray-scale information;

a binarization step of binarizing the multilevel image by using a dot connectivity parameter which is variably controllable to control dot connectivity in a binary image;

a step of transmitting, to the external image output device, test pattern data for acquiring information concerning dot reproducibility of the external image output device;

a reading step of reading a test pattern output by the external image output device based on the test pattern data;

a calculation step of calculating a dot connectivity parameter capable of reproducing dots with a desired dot connectivity for the external image output device, based on the test pattern read in the reading step; and

a transmitting step of transmitting image data binarized by the binarization step to the external image output device,

wherein the binarization step binarizes the multilevel image by using the dot connectivity parameter calculated in the calculation step, and

the transmitting step transmits the image data binarized by the binarization step to the external image output device in which the test pattern has been outputted.

29. (New) An image processing system having an image output device and an image processing apparatus connected to the image output device via a network, the image processing apparatus capable of communicating binary image data and a parameter concerning image processing with the image output device via the network,

wherein the image output device comprises:

an output unit to output a test pattern image for testing characteristics of an image creator;

a reading unit to read the test pattern image output by the output unit;

a calculation unit to calculate a dot connectivity parameter of the image output device from the test pattern image read by the reading unit; and

a storage unit to store the dot connectivity parameter calculated by the calculation unit,

and wherein the image processing apparatus comprises:

communication means for communicating with the image output device;

acquisition means for acquiring the dot connectivity parameter stored in the storage unit of the image output device;

binarization means for binarizing a multilevel image, by using the acquired dot connectivity parameter; and

transmitting means for transmitting image data binarized by the binarization means to the image output device via the network.